ADHS Interim Guidance for Infection Control for Care of Patients with Confirmed or Suspected 2009 H1N1 Influenza A (Swine flu) Virus Infection in a Healthcare Setting

September 15, 2009 (this supersedes guidance posted on July 7, 2009)

This document provides interim guidance for healthcare facilities (e.g., hospitals, long-term care and outpatient facilities, and other settings where healthcare is provided) in Arizona and will be updated as needed.

Background

To date, human cases of novel influenza A (H1N1) virus infection have been confirmed in residents of many U.S. states and Mexico (for the most up-to-date list please see http://www.cdc.gov/h1n1flu/). Investigations of these cases suggest that on-going human-to-human transmission of novel influenza A (H1N1) virus is occurring. Illness signs and symptoms have consisted of influenza-like illness - fever and respiratory tract illness (cough, sore throat, runny nose), headache, muscle aches - and some cases have had vomiting and diarrhea.

Cases of severe respiratory disease, including fatal outcomes, have been reported. The novel influenza A (H1N1) virus that has infected humans in the U.S. and Mexico is a novel influenza A virus that has not previously been identified in North America. This virus is resistant to the antiviral medications amantadine and rimantadine, but is typically susceptible to oseltamivir and zanamivir. To date, nine cases with oseltamivir-resistant novel H1N1 influenza A have been reported in the US.

Implementation of Respiratory Hygiene/Cough Etiquette

Respiratory Hygiene/Cough Etiquette infection control measures (see http://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm) should be implemented at the first point of contact with a potentially infected person. They should be incorporated into infection control practices as one component of Standard Precautions.

Healthcare facilities should establish mechanisms to screen patients for signs and symptoms of febrile respiratory illness who are presenting to any point of entry to the facility for care or making appointments to be seen at the facility. Provisions should be made to allow for prompt segregation and assessment of symptomatic patients.

Interim Infection Control Recommendations

These infection control recommendations should apply to all patients with febrile respiratory illness (defined as fever [greater than 37.8° Celsius] plus sore throat and/or cough and/or other respiratory symptoms).

As of September 15, 2009, in view of mounting evidence that the current wave of the novel H1N1influenza virus is transmitted via droplet (similar to seasonal influenza), the Arizona Department of Health Services (ADHS) recommends that healthcare facilities should consider applying the following modifications to the CDC guidelines. These recommendations are similar to those recommended by the WHO and Health Canada, (e.g., http://www.who.int/csr/resources/publications/infection_control/en/index.html.) All guidance from ADHS is interim and subject to change as additional information becomes available:

For all patients with a febrile respiratory illness (i.e., not just suspect or confirmed cases of H1N1):

Practice good hand hygiene (patient and staff)

Practice good respiratory hygiene (patient and staff)

Practice standard precautions (i.e., treat all body fluids as potentially infectious, including stool; wear gown, gloves and eye-protection if risk of splash) NOTE: Data based on ferret models from CDC indicates that this virus is shed in the stool

Wear surgical mask within 6 feet of a patient with a febrile respiratory illness

Wear an N-95 respirator(1) (fit-tested) or PAPR; eye-protection (face-shield or goggles); gown and gloves (all persons in the room)IF conducting aerosol-generating medical procedures(2)

Notes:

(1) Respirator use should be in the context of a complete respiratory protection program in accordance with Occupational Safety and Health Administration (OSHA) regulations. Information on respiratory protection programs and fit test procedures can be accessed at http://www.osha.gov/SLTC/etools/respiratory. Staff should be medically cleared, fit-tested, and trained for respirator use, including: proper fit-testing and use of respirators, safe removal and disposal, and medical contraindications to respirator use. Additional information on N95 respirators and other types of respirators may be found at:
http://www.cdc.gov/niosh/npptl/topics/respirators/factsheets/respfact.html, and at
http://www.fda.gov/cdrh/ppe/masksrespirators.html.

(2) Aerosol-generating procedures include: endotracheal intubation, suctioning (if not using a closed system), bronchoscopy, and resuscitation involving emergency intubation or cardiac pulmonary resuscitation. See additional CDC guidance below. For the complete CDC Guidance on infection control for patients in a healthcare setting, please see http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm

Infection Control of Ill Persons in a Healthcare Setting

Screening of patients presenting to medical facilities

Patient placement and transport

Any patients who are confirmed, probable or suspected cases and present for care at a healthcare facility should be placed directly into individual rooms with the door kept closed. Healthcare personnel interacting with the patients should follow the infection control

guidance in this document. For the purposes of this guidance, healthcare personnel are defined as persons, including employees, students, contractors, attending clinicians, and volunteers, whose activities involve contact with patients in a healthcare or laboratory setting.

Procedures that are likely to generate aerosols (e.g., bronchoscopy, elective intubation), should be done in a location with negative pressure air handling **whenever feasible**. An airborne infection isolation room (AIIR) with negative pressure air handling with 6 to 12 air changes per hour can be used. Air can be exhausted directly outside or be recirculated after filtration by a high efficiency particulate air (HEPA) filter. Facilities should monitor and document the proper negative-pressure function of AIIRs, including those in operating rooms, intensive care units, emergency departments, and procedure rooms.

Procedures for transport of patients in isolation precautions should be followed. Facilities should also ensure that plans are in place to communicate information about suspected cases that are transferred to other departments in the facility (e.g., radiology, laboratory) and other facilities. The *ill person should wear a surgical mask to contain secretions (if possible) when outside of the patient room,* and should be encouraged to perform hand hygiene frequently and follow respiratory hygiene / cough etiquette practices.

Limitation of healthcare personnel entering the isolation room
Healthcare personnel entering the room of a patient in isolation should be limited to those performing direct patient care.

Management of visitors
Limit visitors to patients in isolation for novel influenza A virus (H1N1) infection to persons who are necessary for the patient's emotional well-being and care. Visitors who have been in contact with the patient before and during hospitalization are a possible source of novel influenza A virus (H1N1). Therefore, schedule and control visits to allow for appropriate screening for acute respiratory illness before entering the hospital and appropriate instruction on use of personal protective equipment and other precautions (e.g., hand hygiene) while in the patient's room. Visitors should be instructed to limit their movement within the facility. Visitors may be offered a surgical mask and should be instructed by healthcare personnel on their use before entering the patient’s room.

Duration of precautions
Isolation precautions (as outlined above) should be continued for seven (7) days from symptom onset or until the resolution of symptoms, whichever is longer. Persons with novel influenza A (H1N1) virus infection should be considered potentially contagious from one day before to 7 days following illness onset. Children, especially younger children, might be contagious for longer periods (up to 10 days after symptom onset.)

Hospitalized persons requiring mechanical ventilation more than 10 days after illness onset and who have been treated for confirmed novel H1N1 no longer require special infection control precautions **IF a negative PCR (endotracheal aspirate) has been obtained.**

***NOTE*: Persons with suppressed immune systems could shed virus for prolonged periods and should remain in the above isolation precautions throughout their hospitalization.**

Surveillance of healthcare personnel
Healthcare personnel should be monitored daily for signs and symptoms of febrile respiratory illness. Healthcare personnel who develop these symptoms should be instructed not to report to work, or if at work, should cease patient care activities and notify their supervisor and infection control personnel. Healthcare personnel at high risk for complications of influenza should be encouraged to seek medical care promptly upon the earliest development of symptoms.

Asymptomatic healthcare personnel who have had an unprotected exposure to Novel influenza A (H1N1) also may continue to work if they are started on antiviral prophylaxis. Interim guidance on antiviral recommendations for close contacts of patients with confirmed or suspected novel influenza A (H1N1) virus infection can be found at http://www.cdc.gov/h1n1flu/recommendations.htm.

Management of ill healthcare personnel
Healthcare personnel should not report to work if they have a febrile respiratory illness. Healthcare personnel who develop a febrile respiratory illness should be excluded from work for 7 days or until symptoms have resolved, whichever is longer.

Stewardship of personal protective equipment and antivirals
Facilities should implement plans to ensure appropriate allocation of personal protective equipment, including N95 respirators, and antivirals.

Environmental infection control
Routine cleaning and disinfection strategies used during influenza seasons can be applied to the environmental management of Novel influenza A (H1N1). Management of laundry, utensils and medical waste should also be performed in accordance with procedures followed for seasonal influenza. More information can be found at http://www.cdc.gov/ncidod/dhqp/gl_environinfection.html.

Facility access control
Facilities should have signage at entry points instructing patients and visitors about hospital policies, including the need to notify staff immediately if they have signs and symptoms of febrile respiratory illness. Facilities in communities where Novel influenza A (H1N1) transmission is occurring should limit points of entry to the facility.

Implementation of facility contingency plans

The current situation with novel flu in the United States is evolving quickly. Staff in healthcare settings should monitor http://www.cdc.gov and http://www.azdhs.gov/flu/h1n1/index.htm for the latest information. Healthcare facilities should be reviewing and making plans to implement their facility contingency response and/or pandemic response plans. This should include making plans for managing increasing patient volume and potential staffing limitations.